RUTGERS
THE STATE UNIVERSITY OF NEW JERSEY

COOPERATIVE
EXTENSION SERVICE
COOK COLLEGE

MIDDLESEX COUNTY EXTENSION SERVICE

Mailing Address:
County Administration Building
New Brunswick, New Jersey 08901

Office Location:
7 Elm Row
New Brunswick, New Jersey

Agriculture (201) 745-3442
4-H Youth Develop. (201) 745-3446
Home Economics (201) 745-3446

February 22, 1982

MISC-XPCT. 02611

Richard A. Musser
T & A Associates
P. O. Box 828
Red Bank, New Jersey 07701

Dear Mr. Musser:

Enclosed please find the results of the various tests run on 2 samples from the bottom of New Market Pond in Piscataway, N. J.

Sample B-6 Surface - This sample is not usable as topsoil as it is now. The organic matter is too high. Also the Mechanical Analysis shows that the sand content is too low and silt and clay too high.

Sample B-10 Subsurface - This sample probably contains some of the original soil from the area before the stream was dammed and would be usable as topsoil as it is now.

Practically speaking when the pond is deepened, both surface and subsurface soil will be removed. If there was a way to thoroughly mix surface and subsurface in the proportion of 1 part surface soil plus 3 parts subsurface soil, you would have quite a good soil with about 47% sand, 32% silt and 21% clay.

Perhaps the 2 materials could be layered in a stockpile and mixed well with some sort of equipment.

Hope this information will be of help to you.

Very truly yours,

Warner H. Thurlow
WARNER H. THURLOW

Elaine K. Fogerty
ELAINE K. FOGERTY

Agricultural Agents
Middlesex County

fh

P 148

NAME Mr. Richard A. Musser, P.E. DATE 1-28-82
T & M ASSOCIATES
ADDRESS PO Bx 828, Red Bank, NJ 07701
Sample number B 6/Surface Serial number MX 9225
Plant to be grown Soil texture organic
Referred to Elaine Fogerty County Middlesex

SOIL TEST REPORT L

Soil Testing Laboratory, Lipman Hall
New Jersey Agricultural Experiment Station

	pH	Magnesium	Phosphorus	Potassium	Organic* Matter	MECHANICAL ANALYSIS** SAND	SILT	CLAY
SOIL TEST RESULTS	6.0 (found)	152	74	33	24.50%	24%	42%	34%
	6.0 (desired)	(parts per million)				Low	High	High
		(relative level for this plant)			V High	Conductivity (.60 OK		

LIME RECOMMENDED
Kind Amount per ____ sq. ft. How to apply

FERTILIZER RECOMMENDED
Kind Amount per ____ sq. ft. How to apply

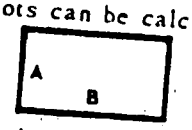
This is not usable as topsoil as it is now If mixed with equal quantities of Course Sand it would be OK

COMMENTS * organic matter by loss on ignition
** It should be noted that a mechanical analysis performed in the presence of organic matter of 24.50% may be biased.

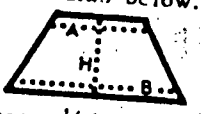
See enclosed letter

INFORMATION FOR LAWNS AND HOME GARDENS

Lime and fertilizer recommendations for lawns and home gardens are generally made in terms of pounds of material per 1000 square feet of area. Approximate number of square feet in areas of different size and shape plots can be calculated using the formulas below. Measure length or width of A, B, D and H in feet.



Area = A x B



Area = ½ H (A + B)

Area = ½ (A x B)

Area = 0.8 (D x D)

Every bag or container of fertilizer must be labeled to show the guaranteed minimum percentage of Nitrogen (N), Phosphate (P_2O_5) and Potash (K_2O) in that order.

EQUIVALENT AMOUNT OF PLANT NUTRIENTS (N, P_2O_5, K_2O) FROM FERTILIZERS OF THE SAME RATIO.

For example: 17 lbs. 6-12-6 contains the same amount of N, P_2O_5 and K_2O as 20 lbs. of 5-10-5.

1-2-1 ratio		1-2-2 ratio		2-1-1 ratio		1-1-1 ratio		1-1-2 ratio	
lbs.	grade	lbs.	grade	lbs.	grade	lbs.	grade	lbs.	grade
20	5-10-5	20	5-10-10	10	10-5-5*	10	10-10-10	14	7-7-14
17	6-12-6	17	6-12-12	8	12-6-6	8	12-12-12	13	8-8-16
13	8-16-8	13	8-16-16	6	16-8-8	6	16-16-16	11	9-9-18
10	10-20-10	10	10-20-20	5	20-10-10	5	20-20-20	10	10-10-20

*For all practical purposes a 10-6-4 fertilizer is the same as a 10-5-5 and one may be substituted for the other.

Weights of lime and fertilizer materials can be converted to ordinary household measures using the following table. The values are not precise but are near enough for all practical purposes. One gallon is equivalent to 4 quarts, or 8 pints. One pint is equivalent to 2 cups, or 32 tablespoons, or 96 teaspoons.

Kind of Material	Approximate Weight Per Volume Measure				
	10 qt. bucket	gallon	quart	pint	cup
Ground limestone	lbs.	lbs.	lbs.	lbs.	lbs.
Hydrated lime	30	12	3	1½	¾
Inorganic mixed fertilizers (1)	10	4	1	½	¼
Organic mixed fertilizers (2)	20	8	2	1	½
	15	6	1½	¾	3/8

(1) Made completely from inorganic materials. (2) Containing some natural or synthetic organic materials.

Distributed in cooperation with U.S. Department of Agriculture in furtherance of the Acts of Congress of May 8 and June 30, 1914. Cooperative Extension Service work in agriculture, home economics, and 4-H, John L. Gerwig, dean of Extension.

NAME T & M ASSOCIATES DATE

ADDRESS (continued)

Sample number B 10/sub surface Serial number MX 9226

Plant to be grown Soil texture sandy loam

Referred to County

SOIL TEST REPORT L

Soil Testing Laboratory, Lipman Hall
New Jersey Agricultural Experiment Station

	pH	Magnesium	Phosphorus	Potassium	Organic Matter	MECHANICAL ANALYSIS SAND	SILT	CLAY
SOIL TEST RESULTS	6.4 (found)	270	70	124	2.16%	54%	28%	18%
	6.5 (desired)	(pounds available an acre) VHigh	VHigh	High	Good	Good	Good	Good
		(relative level for this plant)						

Conductivity (1:2)
.19 Ok

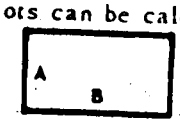
LIME RECOMMENDED
Kind None Amount per ____ sq. ft. How to apply Ok as is

FERTILIZER RECOMMENDED
Kind Amount per ____ sq. ft. How to apply

COMMENTS See enclosed letter

INFORMATION FOR LAWNS AND HOME GARDENS

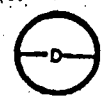
Lime and fertilizer recommendations for lawns and home gardens are generally made in terms of pounds of material per 1000 square feet of area. Approximate number of square feet in areas of different size and shape plots can be calculated using the formulas below. Measure length or width of A, B, D and H in feet.



Area = A x B

Area = ½ H (A + B)

Area = ½ (A x B)



Area = 0.8 (D x D)

Every bag or container of fertilizer must be labeled to show the guaranteed minimum percentage of Nitrogen (N), Phosphate (P_2O_5) and Potash (K_2O) in that order.

EQUIVALENT AMOUNT OF PLANT NUTRIENTS (N, P_2O_5, K_2O) FROM FERTILIZERS OF THE SAME RATIO.

For example: 17 lbs. 6-12-6 contains the same amount of N, P_2O_5 and K_2O as 20 lbs. of 5-10-5.

1-2-1 ratio		1-2-2 ratio		2-1-1 ratio		1-1-1 ratio		1-1-2 ratio	
lbs.	grade	lbs.	grade	lbs.	grade	lbs.	grade	lbs.	grade
20	5-10-5	20	5-10-10	10	10-5-5*	10	10-10-10	14	7-7-14
17	6-12-6	17	6-12-12	8	12-6-6	8	12-12-12	13	8-8-16
13	8-16-8	13	8-16-16	6	16-8-8	6	16-16-16	11	9-9-18
10	10-20-10	10	10-20-20	5	20-10-10	5	20-20-20	10	10-10-20

*For all practical purposes a 10-6-4 fertilizer is the same as a 10-5-5 and one may be substituted for the other.

Weights of lime and fertilizer materials can be converted to ordinary household measures using the following table. The values are not precise but are near enough for all practical purposes. One gallon is equivalent to 4 quarts, or 8 pints. One pint is equivalent to 2 cups, or 32 tablespoons, or 96 teaspoons.

Kind of Material	Approximate Weight Per Volume Measure				
	10 qt. bucket	gallon	quart	pint	cup
	lbs.	lbs.	lbs.	lbs.	lbs.
Ground limestone	30	12	3	1½	¼
Hydrated lime	10	4	1	½	¼
Inorganic mixed fertilizers (1)	20	8	2	1	½
Organic mixed fertilizers (2)	15	6	1½	¾	3/8

(1) Made completely from inorganic materials. (2) Containing some natural or synthetic organic materials.

Distributed in cooperation with U.S. Department of Agriculture in furtherance of the Acts of Congress of May 8 and June 30, 1914. Cooperative Extension Service work in agriculture, home economics, and 4-H, John L. Gerwig, dean of Extension.

MIDDLESEX COUNTY EXTENSION SERVICE
COUNTY ADMINISTRATION BUILDING
NEW BRUNSWICK, NJ 08901 TEL: 745-3442

Below is a list of specifications for satisfactory topsoil surface soil or soil material prepared in the Soils Department of Rutgers University. These specifications apply only to soil material which is to be transported to a new location, and used as is, and not to be mixed with the existing soil in place. This usually means applying the transported soil to a depth of 8 to 12 inches. These specifications do no apply to soil materials which are to be subsequently mixed with the existing surface soil in place.

SPECIFICATIONS FOR SATISFACTORY TOPSOIL, SURFACE SOIL OR SOIL MATERIAL TO BE TRANSPORTED TO A NEW LOCATION AND USED FOR PLANTING PURPOSES.

Physical Limits, Per Cent by Weight

Quantity	Size Fraction	Diameter
None	Gravel	Larger than one inch
Less than 3%	Gravel	¼ to 1 inch
Less than 10%	Gravel	2 mm. to ¼ inch
40-60%	Sand	.05mm. to 2 mm.
25-50%	Silt	.002 mm. to .05 mm.
Less than 20%	Clay	Less tha .002 mm.

CHEMICAL LIMITS

Organic matter (wet digestion method) 2.5-10%
Soil reaction (ph) 4.5-7.0
Salt concentration (1-2 soil water ratio) less than 50.